REMARKS

Claims 4, 6, 7, 9, 10, 12, 13, and 78-82 are pending and under examination in the application. Claims 15, 48-49 and 54 are pending and withdrawn from consideration. Claims 1-3, 5, 8, 11, 14, 16-47, 50-53 and 55-77 have been canceled in previous amendments. Claim 9 is amended in this response solely to change "F(ab')2" to the subscripted form "F(ab')$_2$."

Claim Rejections Under 35 U.S.C. § 112

Claims 4, 6-7, 9-10, 12-13 and 78-82 are rejected under 35 U.S.C. § 112, first paragraph, as allegedly failing to comply with the written description requirement.

This rejection is respectfully traversed. The claims as presented are supported by the specification as described herein. All citations to the specification in this response are with respect to the original specification filed on February 28, 2002. (The locations for support of the amended claims provided in the response filed July 6, 2005, were from the substitute specification filed on November 10, 2003. The undersigned agent regrets any confusion.) Nucleotides encoding the specific regions of the polypeptide are disclosed in items XI, XII, XIII, XIV, and XV at page 17, line 25 to page 18, line 20 of the February 28, 2002 specification, and make direct reference to Figures 5-9; the polypeptides encoded by those nucleotides are disclosed in item XIX, page 18, line 29.

The Examiner states that "[a]lthough the Figures appear to provide a criteria for selecting peptides of SEQ ID NO:3, they do not identify the specific regions of SEQ ID NO:3 with respect to antibody production..." (Sentence bridging pages 4 and 5 of Office Action mailed August 3, 2005.) The Examiner is respectfully directed to the following portion of the specification at page 33, lines 23 and following:

> The amino acid sequence of a 121P1F1 protein as shown in Figure 2 or Figure 3 can be analyzed to select specific regions of the 121P1F1 protein for generating antibodies. For example, hydrophobicity and hydrophilicity analyses of a 121P1F1 amino acid sequence are used to identify hydrophilic regions in the 121P1F1 structure.

At page 33, lines 28 to 34, the specification goes on to indicate that these analyses can be performed for Hydrophilicity profiles, Hydropathicity profiles, Percent (%) Accessible Residues

profiles, Average Flexibility profiles, and Beta-turn profiles, and identifies computer programs suitable for generating such profiles. This portion concludes with the statement, "Thus, each region identified by any of these programs or methods is within the scope of the present invention." (See page 33, lines 34 to 35 of the February 28, 2002 specification.)

Applicants thus submit that specific regions of SEQ ID NO:3 are indeed identified for the purpose of antibody production, as the portions of the polypeptide identified in Figures 5-9 form part of the disclosure of the invention, and the statement that "[t]he amino acid sequence of a 121P1F1 protein as shown in Figure 2 or Figure 3 can be analyzed to select specific regions of the 121P1F1 protein for generating antibodies" indicates that the purpose for identifying these regions is to produce antibodies. Therefore the current claims meet the requirements of 35 U.S.C. § 112, first paragraph, and withdrawal of this rejection is respectfully requested.

Claim Rejections Under 35 U.S.C. § 103(a)

Claims 4, 6-7, 9-10, 12-13 and 78-82 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Tang et al. (WO 01/53312) in view of Harlow et al. (Antibodies, A Laboratory Manual, Chapter 5, pp. 75-76, 1988).

This rejection is respectfully traversed. The Examiner states that "Tang et al teach a polypeptide (SEQ ID NO:3188) having 100% amino acid identity with residues 16-205 of SEQ ID NO:3 and monoclonal antibodies to the polypeptide..." (First sentence of paragraph beginning on page 7 of Office Action mailed August 3, 2005.)

The Tang reference does not single out any particular region of its SEQ ID NO:3188 for generation of antibodies. In contrast, the current invention specifies several regions of instant SEQ ID NO:3 for use in antibody generation. Only by use of the disclosure of the instant application would one select the specific regions claimed for use in generating the antibodies.

The secondary reference, Harlow, is used to suggest raising antibodies to the N-terminus and the C-terminus of a protein. However, the sequence disclosed in Tang is missing the first 15 residues of SEQ ID NO:3 of the instant application. Since Harlow does not supply the missing 15 N-terminal amino acids, the combination of references cannot suggest making antibodies to the N-

terminus of instant SEQ ID NO:3. Also, Harlow does not suggest raising antibodies against residues 178-205 of instant SEQ ID NO:3, only to the rather generic and imprecise "C-terminus" of a protein.

Accordingly, as the combination of Tang and Harlow does not suggest the regions of the polypeptide for use in making antibodies as specified by the current claims, withdrawal of the rejection is respectfully requested.

CONCLUSION

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to withdraw the outstanding rejection of the claims and to pass this application to issue. If it is determined that a telephone conference would expedite the prosecution of this application, the Examiner is invited to telephone the undersigned at the number given below.

In the event the U.S. Patent and Trademark office determines that an extension and/or other relief is required, applicant petitions for any required relief including extensions of time and authorizes the Commissioner to charge the cost of such petitions and/or other fees due in connection with the filing of this document to Deposit Account No. 03-1952 referencing docket no. 511582003420. However, the Commissioner is not authorized to charge the cost of the issue fee to the Deposit Account.

Dated: December 1, 2005

Respectfully submitted,

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